



# GE Healthcare

510(k) Premarket Notification Submission

#### 510(k) Summary

In accordance with 21 CFR 807.92 the following summary of information is provided:

<u>Date:</u> August 17, 2012

Submitter: GE Healthcare

9900 Innovation Dr. Wauwatosa, WI 53226

Contact Person: Bryan Behn

Regulatory Affairs Manager

GE Healthcare, GE Medical Systems Ultrasound and Primary

Care Diagnostics, LLC. Phone: 414-721-4214 Fax: 414-918-8275

<u>Device:</u> <u>Trade Name:</u> C2-9-D Ultrasound Transducer

Common/Usual Name: C2-9-D Ultrasound Transducer

Classification Names: Diagnostic Ultrasound Transducer, 21 CFR 892.1570

Product Code: 90-ITX

Predicate Device(s): K110943 GE LOGIQ E9 Diagnostic Ultrasound System

including C1-5-D transducer

Device Description: The C2-9-D is an ultrasound-imaging device that is attached to a

GE ultrasound imaging system and used for diagnostic imaging. This device does not directly control energy delivered to the patient nor contain any software. The C2-9-D is primarily an abdominal transducer and its primary applications are pediatrics and obstetrics, however it may also be used for other applications

as described in the indications for use.

Intended Use: The device is intended for use by a qualified physician for use

with GE Diagnostic Ultrasound Systems for ultrasound

evaluation of Fetal; Abdominal; Pediatric; Peripheral Vascular;

Urology (including prostate).

Technology: The C2-9-D Transducer employs the same fundamental scientific

technology as its predicate device(s).

<u>Determination of Summary of Non-Clinical Tests:</u>

Substantial Equivalence: The device has been evaluated for acoustic output,

biocompatibility, cleaning and disinfection effectiveness as well as thermal, electrical, electromagnetic and mechanical safety, and has been found to conform with applicable medical device safety standards. The C2-9-D Transducer and its applications comply



# GE Healthcare

510(k) Premarket Notification Submission with voluntary standards:

- 1. IEC60601-1, Medical Electrical Equipment Part 1: General Requirements for Safety
- 2. IEC60601-1-2, Medical Electrical Equipment Part 1-2: General Requirements for Safety – Collateral Standard: Electromagnetic Compatibility Requirements and Tests
- 3. IEC60601-2-37, Medical Electrical Equipment Part 2-37: Particular Requirements for the Safety of Ultrasonic Medical Diagnostic and Monitoring Equipment
- 4. NEMA UD 3, Standard for Real Time Display of Thermal and Mechanical Acoustic Output Indices on Diagnostic Ultrasound Equipment when connected to a GE Ultrasound System
- 5. ISO10993-1, Biological Evaluation of Medical Devices- Part 1: Evaluation and Testing
- 6. NEMA UD 2, Acoustic Output Measurement Standard for Diagnostic Ultrasound Equipment when connected to a GE Ultrasound System
- 7. ISO14971, Application of risk management to medical

The following quality assurance measures were applied to the development of the system:

- Risk Analysis
- Requirements Reviews
- Design Reviews
- Testing on unit level (Module verification)
- Integration testing (System verification)
- Performance testing (Verification)
- Safety testing (Verification)
- Final Acceptance testing (Validation)

#### Summary of Clinical Tests:

The subject of this premarket submission, C2-9-D Transducer. did not require clinical studies to support substantial equivalence.

Conclusion: GE Healthcare considers the C2-9-D Transducer to be as safe, as effective, and performance is substantially equivalent to the predicate device(s).



10903 New Hampshire Avenue Silver Spring, MD 20993

SEP 1 1 2012

Mr. Bryan Behn Regulatory Affairs Manager GE Healthcare 9900 Innovation Drive WAUWATOSA WI 53226

Re: K122515

Trade/Device Name: C2-9-D Diagnostic Ultrasound Transducer

Regulation Number: 21 CFR 892.1570

Regulation Name: Diagnostic ultrasonic transducer

Regulatory Class: II Product Code: ITX Dated: August 17, 2012

Received: August 17, 2012

Dear Mr. Behn:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

This determination of substantial equivalence applies to the following transducers intended for use with the C2-9-D Diagnostic Ultrasound Transducer, as described in your premarket notification:

# Transducer Model Number

#### GE C2-9-D

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 895. In addition, FDA may publish further announcements concerning your device in the <u>Federal Register</u>.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This letter will allow you to begin marketing your device as described in your premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus permits your device to proceed to market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <a href="http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm">http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm</a> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to

http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

If you have any questions regarding the content of this letter, please contact Joshua C. Nipper at (301) 796-6524.

Sincerely Yours,

Janine M. Morris

Director

Division of Radiological Devices Office of In Vitro Diagnostic Device

Suchel D DAn for

**Evaluation and Safety** 

Center for Devices and Radiological Health

Enclosure(s)



# GE Healthcare 510(k) Premarket Notification Submission

510(k) Number (if	`known):		•
Device Name:	C2-9-D Di	iagnostic Ultrasou	and Transducer
Indications for Use	e:		•
	ns for ultrasoun	nd evaluation of F	ician for use with GE Diagnostic Fetal; Abdominal; Pediatric; Peripheral
Prescription Use_ (Part 21 CFR 801		AND/OR	Over-The-Counter Use_N/A_ (Part 21 CFR 801 Subpart C)
(PLEASE DO NO	T WRITE BEI	LOW THIS LINE	E - CONTINUE ON ANOTHER PAGE D)
Concurrence of Cl	ORH, Office of	f In Vitro Diagno	stic Devices (OIVD)
Maha	90h	1	•
(Division Sign-Of	,		
Division of Radio	0		and Cafata
Office of In Vitro	Diagnostic De	evice Evaluation	and Safety
510(k) Number_	<u>K12a51</u>	<u>5</u>	
		Page 1 of 1	



# GE Healthcare

# 510(k) Premarket Notification Submission

# Diagnostic Ultrasound Indications for Use Form GE C2-9-D Transducer

Intended Use: Diagnostic Ultrasound imaging or fluid flow analysis of the human body as follows:

intended Use. Diagnostic	Oillas	ound	magin	g or mult	1 IIOW a	ariarysis	or the n	uman be	buy as io	nows.	
Clinical Application	Mode of Operation										
Clinical Application	В	М	PW	CW	Color	Color M	Power	Combined	Нагтоліс	Coded	Other
Anatomy/Region of Interest			Doppler	Doppler	Doppler	Doppler	Doppler	Modes'	lmaging	Pulse*	[Notes]
Ophthalmic	ļ										
Fetal/Obstetrics <sup>[7]</sup>	N	N	N	N	N	· N	N	N	N	N	[5,6,9]
Abdominal <sup>(1)</sup>	N	N	N	N	N	N	N	N	N	N	[3,5,6,9]
Pediatric	N	N	N	N	N	N	N	N	N	N	[3,5,6,9]
Small Organ <sup>[2]</sup>											
Neonatal Cephalic											
Adult Cephalic											
Cardiac Adult	<u> </u>			•							
Cardiac Pediatric											
Peripheral Vascular	N	N	N	N	N	N	N	N	N	N	[3,5,6,9]
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other <sup>[4]</sup>	N	N	N	N	N	N	N	N	N	N	[3,5,6,9]
Exam Type, Means of Access											
Transesophageal											
Transrectal	<u> </u>										
Transvaginal											
Transurethral											
Intraoperative <sup>[8]</sup>											
Intraoperative Neurological											
Intravascular											
Laparoscopic											

N = new indication; P = previously cleared by FDA

- Notes: [1] Abdominal includes Renal, GYN/Pelvic.
  - [3] Elastography Imaging Elasticity.
  - [4] Other use includes Urology/Prostate
  - [5] 3D/4D Imaging mode
  - [6] Needle guidance imaging
  - [7] Includes infertility monitoring of follicle development
  - [9] Volume navigation
  - [\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

(PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of In Vitro Diagnostic Devices (OIVD)

Prescription User (Per 21 CFR 801,109)

Radiological Device

19